



# The Promises and Perils of Artificial Intelligence

## A Conversation with Families



featuring **Ken Shelton**

### GLOSSARY OF TERMS

TERM	DEFINITION
Adaptive Learning	Educational technology that adjusts the difficulty, pace, or type of content based on individual student performance. Like having a tutor that automatically provides easier or more complex problems based on a student's performance.
AI Hallucination	When an AI system confidently provides information that is entirely false or made up, but presents it as if it were true. The AI isn't lying intentionally—it simply doesn't know the difference between factual and fabricated information.
Algorithm	A set of step-by-step instructions that tells a computer how to solve a problem or complete a task. Like a recipe that a computer follows to make decisions or process information.
Algorithmic Auditing	The process of examining AI systems to identify potential problems, biases, or unintended consequences; similar to conducting a safety inspection to ensure the AI is working fairly and effectively.
Algorithmic Bias	When AI systems make unfair or discriminatory decisions because of biases in their training data or design, for example, an AI might unfairly favor certain groups of students over others when making recommendations.
Artificial Intelligence	The ability of computers and machines to perform tasks that typically require human intelligence, such as learning, decision-making, and problem-solving.
Black Box	An AI system whose decision-making process is not transparent or easily understood. You can see what goes in and what comes out, but you can't see how the AI reached its conclusion.
Chatbot	A software application designed to simulate conversation with human users, especially over the internet. It automates responses to user inputs, often in service contexts, helping answer questions or guide users without human intervention. In schools, these might help students with homework questions or provide administrative information.
COPPA (Children's Online Privacy Protection Act)	A federal law that requires parental consent before collecting personal information from children under 13 years old. This is a crucial consideration when schools use AI tools that collect student data.
Data Training	The process of teaching AI systems by showing them large amounts of example data. The quality and representation of this training data significantly affects how well the AI performs and whether it develops biases.
Deep Learning	A type of machine learning where computers use layers of neural networks (like a brain) to recognize patterns and make decisions from large amounts of data.
Digital Divide	The gap between those who have access to modern technology and the internet, and those who don't. AI tools can either help bridge this gap or make it worse, depending on how they're implemented.

TERM	DEFINITION
Disinformation	False information deliberately created and spread to deceive people. AI can both create and help identify disinformation.
FERPA (Family Educational Rights and Privacy Act)	A federal law that protects student education records and gives parents rights over their children's educational information. Schools must be careful about how AI systems access and use student data.
Generative AI	A type of artificial intelligence that creates <i>new content</i> , like text, images, or music, based on patterns it has learned from existing data. (example: ChatGPT, Gemini, DALL·E, Grok, etc.)
Large Language Model (LLM)	AI systems are trained on vast amounts of text to understand and generate human language. These models can write, summarize, translate, and answer questions in ways that often seem remarkably human-like.
Machine Learning	A type of AI that uses algorithms and data to learn patterns and make decisions without being specifically programmed for each task.
Misinformation	False information that is spread without malicious intent—the person sharing it may genuinely believe it's true. AI systems can sometimes accidentally create or amplify misinformation.
Neural Networks	Computer systems are inspired by how the human brain works, using interconnected nodes (like neurons) to process information and learn patterns. These help AI systems recognize images, understand speech, and make complex decisions.
Personalized Learning	An educational approach that uses AI to tailor instruction to each student's individual needs, strengths, and learning style. The AI tracks progress and customizes the experience for each learner.
Personally Identifiable Information (PII)	Any data that can be used to identify a specific person, including names, addresses, social security numbers, or even combinations of seemingly anonymous information that could reveal someone's identity.
Prompt Engineering	The skill of writing effective instructions or questions to get the best results from AI systems. Like learning how to ask the right questions to get helpful answers from a very knowledgeable assistant
Synthetic Media	Artificially created content like deepfake videos, AI-generated images, or computer-created text that can be very difficult to distinguish from real content created by humans.
Transparency in AI	Making AI systems' processes, data sources, and decision-making methods open and understandable to users. This helps build trust and allows for accountability.

**Resources that shaped the development of this glossary:**

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